REMARKS

I. Status of Claims

Claims 17-100 are pending. Claims 21-25, 30-37, 40, 41, 43, 54, 55, 58-60, 65-72, 75, 76, and 78 are withdrawn from consideration by the Examiner, as directed to nonelected invention/species. No amendments are made by this reply.

II. Claim Rejection under 35 U.S.C. § 112

The Office finalizes the rejection of claims 26, 27, 61, and 62 under 35 U.S.C. § 112, second paragraph, as indefinite. Office Action at page 2. In particular, the Office maintains that "claims 26, 27, 61, and 62 recite pyridine derivatives and they should read on formula (VII) but the recited pyridine derivatives comprise a cyano radical as recited in the claims wherein the formula (VII) non[e] of R12, R13 and R14 represents a cyano radical." *Id.* at page 3. Applicants respectfully disagree for the reasons of record and the following reasons provided below.

Under Section 112, second paragraph, "definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) the content of the particular application disclosure; (B) the teachings of the prior art; and (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made." M.P.E.P. § 2173.02 (8th ed. Rev. 2, 2004). In this case, the skilled artisan analyzing these items would clearly understand that R12, R13, and R14 encompassed cyano groups.

Specifically, R12 is chosen from *alkyl groups, optionally substituted*, and aryl groups, optionally substituted. *See e.g.*, claim 17. R13 is defined in the claims and specification as chosen from hydrogen; *alkyl groups, optionally substituted*; and aryl

groups, optionally substituted. *Id.* R14, likewise, is chosen from hydrogen; nitrile groups, *alkyl groups, optionally substituted*; and –COOR groups wherein R is chosen from hydrogen and alkyl groups, optionally substituted. *Id.* A cyano group is commonly known in the art as the functional group –CN in a chemical compound, such as a nitrile, which is an organic compound "containing the group –CN bound to an organic compound." Dictionary of Chemistry 162, 381 (4th ed., John Daintith 2000).

Here, the optionally substituted alkyl group can be a carbon atom substituted with a nitrogen atom, i.e., forming a –CN group. Thus, the language of the claim is such that a skilled artisan could interpret the metes and bounds of the claim to understand how to avoid infringement. *See, e.g., Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470, 28 U.S.P.Q.2d 1190, 1195 (Fed. Cir. 1993). Furthermore, at least on page 11 of the specification, Applicants exemplify possible compounds falling within the purview of formula (VII), of which, *e.g.,* among other things, 2,6-dihydroxy-3-cyano-4 methyl pyridine and those of the cyanopyridone, aminonitropyridone and aminocyanopyridone families fall within formula (VII). This is further evidence supporting the inclusion of cyano groups within the meaning of "alkyl groups, optionally substituted." In light of the above, Applicants respectfully request the withdrawal of this rejection.

III. Claim Rejection under 35 U.S.C. § 103

The Office also finalizes the rejection of claims 17-20, 38, 42, 44-53, 56-57, 73, 77, and 79-100 under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. 5,034,014 to Wenke ("Wenke"). Office Action at page 2. In particular, the Office asserts that "it is well established that the substitution of methyl for hydrogen on a known compound is not a patentable modification absent unexpected results" by citing *In re Wood* and *In re*

Lohr. Office Action at page 4. Applicants respectfully disagree for the reasons of record and for the following reasons provided below.

The Office continues to maintain a *per se* rationale of obviousness among chemical compounds having close structural similarity. *Id.* As pointed out in our previous response, this is not an automatic conclusion. *See In re Elpern*, 326 F.2d 762, 767, 140 U.S.P.Q. 224, 228 (C.C.P.A. 1964). Neither *In re Wood*, 199 U.S.P.Q. 137 (C.C.P.A. 1978) nor *In re Lohr*, 137 U.S.P.Q. 548 (C.C.P.A. 1963), relied on by the Examiner rest solely on a finding of close structural similarity. In fact, in *Wood*, the court indicated that based on the antimicrobial activity provided in the prior art reference, a skilled artisan would have been motivated to make the claimed compounds with the expectation of possessing antimicrobial activity. 199 U.S.P.Q. at 139. Furthermore, in *Lohr*, the court found obviousness based on "[c]onsidering all the evidence of record." 137 U.S.P.Q. at 551.

In this case, Wenke provides solely for 2,6-dihydroxypyridine and no other alternatives. Wenke at Col. 1, ll. 4-10. In fact, Wenke provides no generic description of this oxidative dye coupler, like he does for the other components of his composition, i.e., aromatic amines and aromatic aldehydes. *Id.* Instead, Wenke recites a solution containing an aromatic amine, aldehyde, 2,6-dihydroxypyridine, and hydrogen peroxide. *Id.* at Col. 2, ll. 1-7. In fact, Wenke expects cross-reactions between 2,6-dihydroxypyridine and the aromatic amine, as taught in U.S. Patent No. 3,231,471. *Id.* at ll. 16-22. Thus, a skilled artisan would have not been motivated to modify 2,6-dihydroxypyridine given its surprising results and known cross reactivity with aromatic amines, i.e., para substituted benzenes. Instead, a skilled artisan would have been led to modify other components of Wenke's composition.

In fact, when one examines Wenke as a whole, it is apparent that Wenke describes a "new" method for dyeing hair wherein the hair is treated with an aqueous solution containing an aromatic amine, an aromatic aldehyde, 2,6-dihyroxypyridine, and an oxidizing agent, preferably hydrogen peroxide. Specifically, Wenke explains at Col. 1, line 62-Col. 2, line 15, that two reactions occur on the hair independently of each other. The first reaction occurs where the aromatic amine reacts with the aromatic aldehyde, i.e., a Schiff base reaction. The second reaction occurs where 2,6-dihyroxypyridine is oxidized by the oxidizing agent. As characterized by Wenke at Col. 2, ll. 7-12, these two reactions "substantially do not" cross react. Each of these two independent reactions forms a separate dye resulting in a composite hue on the keratin fibers. Wenke at Col. 3, ll. 17-25.

In contrast, the present disclosure expressly provides that "the coloration of said at least one keratin fiber is achieved *without an oxidizing agent.*" *See, e.g.*, independent claim 17 (emphasis added). Moreover, the process of the present disclosure does not involve two independent reactions, as described in Wenke. As provided in the present disclosure, the compound comprising the methylene group, which the Examiner finds comparable to 2,6-dihydroxypyridine, i.e., element a, and the compound chosen from aldehyde, ketone, quinine, diiminoisoindoline derivative, 3-aminoisoindoline derivative, i.e., element b, react together without an oxidizing agent. This is in stark contrast to Wenke's express teaching that 2,6-dihydroxypyridine reacts with an oxidizing agent, i.e., hydrogen peroxide.

Moreover, Wenke discloses and uses 2,6-dihydroxypyridine as a conventional oxidation dye coupler, Col. 1, ll. 50-52, and the oxidation of 2,6-dihydroxypyridine with peroxide is also known and used in Wenke, Col. 1, ll. 65-66. Thus, Wenke proceeds

according to accepted practices. The present disclosure, however, proceeds contrary to these accepted practices, i.e., without an oxidizing agent. As provided in M.P.E.P. § 2145(X)(b)(3), "the totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness" citing *In re Hedges*, 783 F.2d 1038, 228 U.S.P.Q. 685 (Fed. Cir. 1986).

Based on the Office's rationale, a skilled artisan must ignore the express teaching in Wenke requiring the use of an oxidizing agent to react with 2,6-dihydroxypyridine. Doing so, however, is not in keeping with the requirement to consider each reference in its entirety, and is improper. Further, a skilled artisan could not arrive at the claimed invention without relying on Applicants' disclosure. Relying on such information, however, is also fundamentally improper to support a rejection under § 103. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998) ("permit[ing] an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat patentability . . . would be an 'illogical and inappropriate process by which to determine patentability.'") (citations omitted). As such, it is only by hindsight or by ignoring portions of the reference teachings that such selections are suggested. This, of course, is improper. *See In re Fine*, 5 U.S.P.Q. 1592, 1600 (Fed. Cir. 1988) (reiterating that "[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."). Thus, the rejection is improper and Applicants respectfully request the withdrawal of the rejection.

IV. Allowable Subject Matter

Applicants would like to thank Examiner Elhilo for indicating claims 28-29, 39, 43, 63, and 74 contain allowable subject matter. Office Action dated April 5, 2004, at page 8. However, Applicants will continue to prosecute all the pending claims at this time.

V. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: April 29, 2005

By: 
Adriana L. Burgy
Reg. No. 48,564